

**IN THE DRAWINGS:**

Enclosed herein is new Figure 6, which illustrates another embodiment of the fixation unit illustrated in FIG. 4A. Page 5, lines 11-13, the first full paragraph on page 14, and Claims 12-14 and 18 of the originally filed application discuss the feature(s) illustrated in FIG. 6. As such, Applicant respectfully submits that no new matter is presented in new FIG. 6.

**REMARKS**

Claims 1-14, 16-18 and 20-24 are pending. By this Amendment, Claims 15 and 19 are cancelled without prejudice or disclaimer; Claims 1, 4, 10, 12, 16-18 and 20-21 are amended; the Specification is amended; and new formal drawing Figure 6 is presented. Applicant respectfully submits that no new matter is presented herein.

**Claim Objections**

Claim 4 is objected to because “the room temperature” feature recited therein lacks antecedent basis. As the claim has been amended responsive to the objection, Applicant respectfully requests the objection be withdrawn.

Claim 21 is objected to for not delineating the preamble from the body of the claim. As the claim has been amended responsive to the objection, Applicant respectfully requests the objection be withdrawn.

**Drawings**

The drawings are objected to under 37 C.F.R. §1.83(a) for not showing all of the features recited by the claims. In particular, the Office Action asserts the “compressing part” and “suspension member” features recited by the claims are not illustrated in the drawings. Applicant respectfully traverses the objection.

In particular, Applicant respectfully notes the compressing part refers to the rubber roller (230), which is clearly illustrated in Figures 1-2. Regarding the suspension member, Applicant respectfully notes Claims 15 and 19, which recite the feature in question, have been cancelled without prejudice or disclaimer. As such, Applicant respectfully requests the objection be withdrawn.

**Claim Rejections – 35 U.S.C. §112**

Claim 4 is rejected under 35 U.S.C. §112, second paragraph. As the claim has been amended responsive to the rejection, Applicant respectfully requests the rejection be withdrawn.

Claims 12-14 and 18 are rejected under 35 U.S.C. §112, second paragraph. As the claims have been amended and new formal drawing Figure 6 presented herein so as to be responsive to the rejection, Applicant respectfully requests the rejection be withdrawn.

**Claim Rejections – 35 U.S.C. §102 and §103**

Claims 1, 5-6, 9, 15 and 21-22 are rejected under 35 U.S.C. §102(b) as being anticipated by JP 10-267,111 to Kazuyuki et al. (“Kazuyuki”). Claims 2-4, 7-8 and 23-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kazuyuki in view of U.S. Patent Number 5,999,789 to Sawamura. Claims 10-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kazuyuki in view of Sawamura. Claims 12-14, 16, 18 and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sawamura in view of Kazuyuki and U.S. Patent No. 6,091,926 to Yamada. Claims 17 and 19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sawamura in view of Yamada. Applicant respectfully traverses the rejections for the following reasons.

Independent Claims 1, 10, 12, 16-18 and 21 each recite, among other features, that the drive gear is made of a material having a coefficient of thermal expansion that is less than that of the thermal fixation roller.

Applicant respectfully submits that none of the applied art of record disclose or suggest such a feature.

The Office Action asserts Kazuyuki discloses a thermal fixation roller (3), a heating part that heats the thermal fixation roller (3), a drive gear (4) mounted on the thermal fixation roller (3), and an outer diameter of the thermal fixation roller (3) that is equal to or greater than an inner diameter of the drive gear (4) as the heating part heats the thermal fixation roller.

Applicant respectfully notes that Kazuyuki discloses a crank shaft or thermal fixation roller (3) and a drive gear (4) attached to an end of the crank shaft or thermal fixation roller (3). The end of the crank shaft (3) includes a groove (3a) formed thereon and the drive gear (4) includes a projection (4a). The projection (4a) is loosely fitted within the groove (3a). Kazuyuki clearly states that because the projection (4a) is made of synthetic material, during operation, the projection (4a) thermally expands to provide a tight fit therebetween with the groove (3a). As such, Kazuyuki lacks any disclosure or suggestion of a heating part that heats the crank shaft or thermal fixation roller (3). Further, Kazuyuki clearly states the projection (4a) is made of a synthetic resin material having a large coefficient of thermal expansion and expands during operation and not because of a heating part that heats the crank shaft (3). Moreover, Applicant notes the outer diameter of the crank shaft (3) appears to be substantially less than the inner diameter of the drive gear (4), as shown in Figures 1-2 of Kazuyuki. Further, Kazuyuki fails to disclose or suggest the drive gear is made of a material having a coefficient of thermal expansion that is less than that of the thermal fixation roller.

Sawamura appears to disclose a heating part (4) that is provided within a heat roller (1). However, Applicant notes that in the first full paragraph on page 10 of the Office Action, the Office Action appears to admit that Sawamura fails to disclose or suggest an outer diameter of a thermal fixation roller being larger than or equal to an inner diameter of a drive gear as the heating part heats the thermal fixation roller. Applicant also notes that Sawamura fails to disclose or suggest the drive gear is made of a material having a coefficient of thermal expansion that is less than that of the thermal fixation roller. As such, Sawamura does not overcome or otherwise address all of the deficiencies of Kazuyuki.

U.S. Patent Number 6,091,926 to Yamada is cited merely for teaching that it is known in the art to provide a fixing device that includes a first mode that uses a fixation unit to record information onto a recording paper and a second mode that stops heating the fixation unit. Therefore, Yamada, like Kazuyuki and Sawamura, fails to disclose or suggest an outer diameter of a thermal fixation roller being larger than or equal to an inner diameter of a drive gear as the heating part heats the thermal fixation roller. Also, Yamada, like Sawamura, fails to disclose or suggest the drive gear is made of a material having a coefficient of thermal expansion that is less than that of the thermal fixation roller. As such, Yamada, like Sawamura, does not overcome or otherwise address the above-described deficiencies of Kazuyuki.

Regarding Claims 12 and 18, we note Sawamura, Kazuyuki and Yamada each fail to disclose or suggest a thermal fixation roller having a projection and a drive gear mounted on the thermal fixation roller having a notch into which the projection of the thermal fixation roller is inserted. Put simply, the applied art of record fails to teach

each and every feature of Claims 12-14 and 18 as none of the references teach or suggest a thermal fixation roller having a projection and a drive gear mounted on the thermal fixation roller having a notch into which the projection of the thermal fixation roller is inserted.

Regarding Claims 16 and 20, as noted above, the Office Action admits that Sawamura fails to disclose or suggest an outer diameter of a thermal fixation roller being larger than or equal to an inner diameter of a drive gear as the heating part heats the thermal fixation roller. Furthermore, the outer diameter of the crank shaft (3) in Kazuyuki appears to be substantially less than the inner diameter of the drive gear (4), as shown in Figures 1-2. Yamada, like Kazuyuki and Sawamura, fails to disclose or suggest an outer diameter of a thermal fixation roller being larger than or equal to an inner diameter of a drive gear as the heating part heats the thermal fixation roller. As such, Yamada, like Kazuyuki, does not overcome or otherwise address the above-described deficiency of Sawamura.

To qualify as prior art under 35 U.S.C. §102, a single reference must teach, i.e., identically describe, each feature of a rejected claim. To establish *prima facie* obviousness under 35 U.S.C. § 103, each feature of a rejected claim must also be taught or at least suggested by the applied art of record. See M.P.E.P. § 2143.03. As explained above, Kazuyuki, Sawamura, and Yamada, fail to disclose or suggest each and every feature recited by Claims 1, 10, 12, 16-18 and 21. Therefore, Applicant respectfully submits Claims 1, 10, 12, 16-18 and 21 are not anticipated by or rendered obvious by the applied teachings of Kazuyuki, Sawamura, and Yamada and should be deemed allowable.

Claims 2-9 depend from Claim 1. Claim 11 depends from Claim 10. Claims 13-14 depend from Claim 12. Claims 22-24 depend from Claim 21. It is respectfully submitted that these dependent claims should be deemed allowable for the same reasons their corresponding base claims are allowable, as well as for the additional subject matter recited therein. For the above-provided reasons, Applicant respectfully requests withdrawal of the rejections.

**Conclusion**

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding objections and rejections, allowance of Claims 1-14, 16-18 and 20-24, and the prompt issuance of a Notice of Allowability are respectfully solicited.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 027019-00001.**

Respectfully submitted,  
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Enclosure: New formal drawing Figure 6

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